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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,215	06/21/2002	Jyh-Fong Lin	VIAP0029USA	2836

27765 7590 08/23/2005

NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION
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EXAMINER	
EJAZ, NAHEED	
ART UNIT	**PAPER NUMBER**
2631	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/064,215	LIN ET AL.	
	Examiner	Art Unit	
	Naheed Ejaz	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *04/26/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because of the following: Delete the title of the invention from the abstract. Correction is required. See MPEP § 608.01(b).

Title

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Change title to 'Clock Recovery Circuit and Related Methods'. Appropriate correction is required.

Information Disclosure Statement

3. The information disclosure statement filed 04/26/2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Objections

4. Claims 1-5 are objected to because of the following informalities: applicant claims 'a data recovery circuit' (page # 10, lines 3-4, 21, 25, 28 and page # 11, line 5) while the body of the claims calls for clock discovery. Replace 'data' by 'clock'. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1 and 2 are rejected under 35 U.S.C. 102(a) as being anticipated by Nonaka et al. (5,047,733), hereafter referred to as Nonaka.

Refer to claim 1, Nonaka discloses, 'a clock (data) recovery circuit for generating an output signal that is synchronized with an input signal; the data recovery circuit comprising: a charge pump for generating a charging current according to a phase difference between the input signal and the output signal (see figure 9, element 4, col.1, lines 42-56); a first filter electrically connected to the charge pump for generating an output voltage corresponding to the charging current (see figure 9, element 5, col.1, lines 57-60); an oscillator for adjusting a phase or frequency of the output signal according to a voltage (see figure 9, element 6, col.1, lines 61-65); a switch circuit electrically connected between the first filter and the oscillator for controlling the electrical connection between the first filter and the oscillator (see figure 9, element 81); and a second filter electrically connected between the switch circuit and the oscillator for adjusting the output voltage of the first filter (see figure 9, element 5a); wherein when the charge pump is operating, the switch circuit disconnects the first filter from the oscillator, and when the charge pump stops operating, the switch circuit connects the

first filter and the oscillator such that the oscillator adjusts the frequency or phase of the output signal according to the output voltage of the first filter (see col.5, lines 11-28).

Refer to claim 2, Nonaka teaches, 'the second filter comprises at least a second capacitor (see figure 10B, element 21, 22, or 23, col.5, lines 52-53); when the switch circuit connects the first filter and the oscillator, the second capacitor is charged or discharged by the output voltage of the first filter so as to change a waveform of the output voltage (see col.6, lines 10-36).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 3, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nonaka et al. (5,047,733), hereafter referred to as Nonaka.

Refer to claim 3, Nonaka discloses, 'the first filter comprises at least a first capacitor (see col.4, lines 52-53), and the charging current charges or discharges the first capacitor for changing the output voltage of the first filter.

However, Nonaka does not disclose 'the charging current charges or discharges the first capacitor' explicitly.

It is well known in the art when current flows, capacitor charges up and it starts discharging when we short circuit it by using switch circuit ([1]see foot note on page # 6 of this Office Action), therefore, Examiner is taking an official notice.

It would have been obvious to one of ordinary skill in the art to implement the that is well known in the art into Nonaka in order to store electric charge and hence store electric energy.

Refer to claim 4, Nonaka teaches, 'a clock (claimed data) recovery method for generating an output signal that is synchronized with an input signal; the method comprising: generating a charging current according to a phase difference between the input signal and the output signal (see figure 9, element 4, col.1, lines 42-56); generating an output voltage according to the charging current' (see col.1, lines 42-61).

However, Nonaka does not disclose explicitly adjustment of a frequency or phase after voltage has been stable.

It is well known in the art that in order to adjust frequency or phase of the output signal, output voltage has to be stable because if it is not stable output voltage would be fluctuating and makes it impossible to change DC component and fix error.

It would have been obvious to one of ordinary skill in the art to implement the that is well known in the art into Nonaka in order to synchronize output signal with input signal by adjusting frequency or phase after output voltage is stable.

Refer to claim 5, Nonaka discloses, 'the output voltage is generated from charging or discharging a filter by the charging current' (see figure 10B, element 21, 22, or 23, col.5, lines 52-53 and col.4, lines 52-53) (it should be noted that filter includes a

circuit with capacitors which are responsible for charging and discharging filter by the charging current from charging pump (see figure 9, element 4)).

However, Nonaka does not disclose explicitly charging or discharging a filter.

It is well known in the art when current flows, capacitor charges up and it starts discharging when we short circuit it by using switch circuit ([1]see foot note), therefore, Examiner is taking an official notice.

It would have been obvious to one of ordinary skill in the art to implement the that is well known in the art into Nonaka in order to store electric charge and hence store electric energy.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Sumita et al. reference, 5,548,249 published on 08/20/1996 "Clock Generator and Method for Generating a Clock", the Sasaki reference, 5,497,128 filed on 10/05/1993 "Local Oscillator System and Frequency Switching Method for Minimizing Spurious Components", the Momtaz et al. reference, 5,950,115 filed on 08/29/1997 "GHZ Transceiver Phase Lock Loop having Autofrequency Lock Correction".

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naheed Ejaz whose telephone number is 571-272-5947. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

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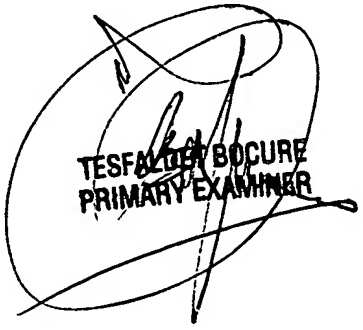
[1] 4,984,255

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/5/2005



Naheed Ejaz
Examiner
Art Unit 2631